

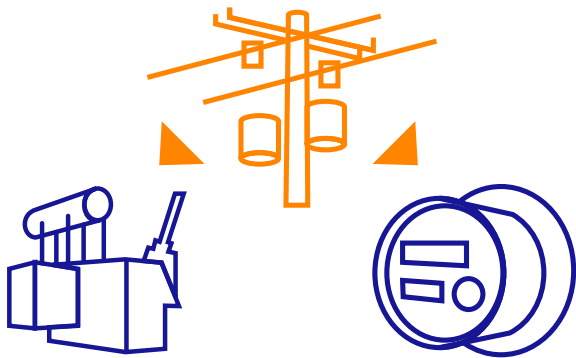
LV VOLTAGE MONITORING

Low voltage networks represent the largest part of the electrical distribution system. Yet Power Distribution Businesses know very little about how these assets are performing. Relying on customers to report faults or power quality issues.

The voltage at customers' sites by law is meant to be 230V +/- 6%. Yet there is almost no end-of-line voltage monitoring. At the peak of winter it is accepted that many customers at the end of longer or heavily loaded feeders will receive below 216V.

Rural customers at the end of long high voltage feeders are very susceptible to voltage issues and in addition these same rural customers can be generating high voltage harmonics which are significant source or power quality issues for other rural customers.

The WVAC DTMv is an ingenious yet simple, low cost device to monitor 3 phase voltages. The DTM is available for pad mount installation and a separate pole top version is also available.



Customer expectations and new legislation mean simply not knowing will no longer be acceptable by law.



DTMv FUNCTIONALITY

ALARMS

Alarms events are considered urgent and are sent via e-mail, text message and or connected directly to the SCADA systems via OPC or web services.

Voltage Alarm	Loss of Voltage	Immediate message when voltage on 1 phase drops continuously below 150V for 1 minute
Voltage Alarm	Voltage re-established	Message when all 3 voltages return above 190V for 1 minute after a voltage loss alarm
Optional	10 min voltages	The 3 voltage readings sent every 10 minutes.

REPORTS

Reports are information sent from the sensor on a regular basis. This information is stored and reported via daily or weekly via emails. These reports are user-configurable to ensure only useful information is brought to your attention.

Over & Under Voltage	Event base reporting, based on over & under voltage thresholds, daily reports on the number and duration of voltage events.
Voltage Harmonics	Event base reporting, based on voltage harmonic thresholds, daily reports on the number and duration of voltage harmonic events

RECORDS

Data Set	Every 10 mins the following is stored to the sensors: 3 voltages, THD voltage, phase angle and individual harmonic values 3, 5, 7, 9 and 17. Up to 2 year of 10-minute data can be stored on the DTM and accessed via the Android App.
Event Data Set	Store to the sensor start and end times of an event are stored with the full data set at trigger and then every 10 minutes.



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